

AMENDMENT

In the Claims:

Applicant requests amendment of claims 25, 29, 32, 38, 41, and 47 as indicated herein. In addition, Applicant requests entry of new claims 52-56. Claims 35-37, 40, and 43-46 have been canceled without prejudice. A complete list of the claims according to 37 C.F.R. § 1.21(c) follows:

1. to 24. (Canceled)

25. (Currently Amended) A polypeptide comprising a sequence selected from the group consisting of:

(a) ~~ILLWQPIPV (SEQ ID NO: 1),~~

(b) ~~(a)~~ a derivative sequence of ILLWQPIPV (SEQ ID NO: 1), said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) ~~(b)~~ CPRFQELESETLKSE (SEQ ID NO: 2),

(d) ~~(c)~~ a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions, and

(e) ~~(d)~~ a fragment sequence of sequence (a), (b), or (c), ~~or (d)~~;

wherein the polypeptide has HLA class-I restricted activity.

26. (Previously presented) An isolated nucleic acid molecule comprising a sequence selected from the group consisting of:

(a) a nucleic acid molecule encoding the polypeptide of claim 25; and

(b) a nucleic acid molecule, the complementary strand of which specifically hybridises to a nucleic acid molecule encoding the polypeptide of claim 25.

27. (Previously presented) A vector comprising a nucleic acid molecule according to claim 26.

28. (Previously presented) A host cell comprising a vector according to claim 27.

29. (Currently Amended) A monoclonal antibody capable of specifically binding to a polypeptide comprising a sequence selected from the group consisting of: the polypeptide of claim 25.

(a) ILLWQPIPV (SEQ ID NO: 1),

(b) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) CPRFQELESETLKSE (SEQ ID NO: 2),

(d) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions, and

(e) a fragment sequence of sequence (a), (b), (c), or (d);
wherein the polypeptide has HLA class-I restricted activity.

30. (Previously presented) A method of detecting or monitoring cancer in a patient, the method comprising the step of detecting or monitoring elevated levels of the nucleic acid molecule according to claim 26 in a sample from the patient.

31. (Previously presented) A method of detecting or monitoring cancer in a patient, the method comprising the step of detecting or monitoring elevated levels of the nucleic acid molecule according to claim 26 with another nucleic acid molecule or a probe in combination with a reverse transcription polymerase chain reaction.

32. (Currently Amended) A method of detecting or monitoring cancer in a patient, the method comprising the step of detecting or monitoring elevated levels of a polypeptide comprising a sequence selected from the group consisting of: the polypeptide according to claim 25.

(a) ILLWQPIPV (SEQ ID NO: 1),

(b) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) CPRFQELESETLKSE (SEQ ID NO: 2),

(d) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions, and

(e) a fragment sequence of sequence (a), (b), (c), or (d);
wherein the polypeptide has HLA class-I restricted activity.

33. (Previously presented) The method according to claim 32 wherein the detecting or monitoring step includes an antibody selective for the polypeptide of claim 25 to detect the polypeptide.

34. (Previously presented) The method according to claim 33 further comprising the step of using an enzyme-linked immunosorbant assay.

35. to 37. (Canceled)

38. (Currently amended) A method of prophylaxis or treatment of cancer in a patient, the method comprising the step of administering to the patient a pharmaceutically effective amount of a polypeptide comprising a sequence selected from the group consisting of: according to claim 25,

(a) ILLWQPIPV (SEQ ID NO: 1),

(b) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) CPRFQELESETLKSE (SEQ ID NO: 2),

(d) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions, and

(e) a fragment sequence of sequence (a), (b), (c), or (d); wherein the polypeptide has HLA class-I restricted activity.

or a pharmaceutically effective fragment thereof.

39. (Previously presented) A method of prophylaxis or treatment of cancer in a patient, the method comprising the step of administering to the patient a pharmaceutically effective amount of the monoclonal antibody according to claim 29.

40. (Canceled)

41. (Currently Amended) A polypeptide comprising a protein carrier, which is not PAP or another fragment of PAP, covalently attached to ~~the polypeptide~~ according to claim 25; a polypeptide comprising a sequence selected from the group consisting of:

(a) ILLWQPIPV (SEQ ID NO: 1),

(b) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) CPRFQELESETLKSE (SEQ ID NO: 2), and

(d) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions;

wherein the polypeptide has HLA class-I restricted activity;

or a pharmaceutically effective fragment thereof.

42. (Previously presented) A nucleic acid molecule encoding a polypeptide according to claim 41.

43. to 46. (Canceled)

47. (Currently Amended) A immunogenic composition comprising ~~(a) the polypeptide according to claim 25~~ (i) a polypeptide comprising a sequence selected from the group consisting of:

(a) ILLWQIPV (SEQ ID NO: 1),

(b) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(c) CPRFQELESETLKSE (SEQ ID NO: 2), and

(d) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions;

wherein the polypeptide has HLA class-I restricted activity;

or a pharmaceutically effective fragment thereof, where said polypeptide or fragment thereof is ~~optionally~~ attached to an immunogen which is not PAP or another fragment of PAP, and

~~(b)~~ (ii) a pharmaceutically acceptable carrier.

48. (Previously presented) A immunogenic composition comprising (a) the polypeptide according to claim 41 or a pharmaceutically effective fragment thereof, where said polypeptide or fragment thereof is optionally attached to an immunogen which is not PAP or another fragment of PAP, and (b) a pharmaceutically acceptable carrier.

49. (Previously presented) A kit comprising the polypeptide according to claim 25 for use with a method of detecting or monitoring cancer.

50. (Previously presented) A kit comprising the nucleic acid molecule according to claim 26 for use with a method of detecting or monitoring cancer.

51. (Previously presented) A kit comprising the monoclonal antibody according to claim 29 for use with a method of detecting or monitoring cancer.

52. (New) The method according to claim 32 wherein the cancer is a prostate cancer.

53. (New) The method according to claim 39, wherein the cancer is a prostate cancer.

54. (New) A method of inducing an immunogenic response in a patient, the method comprising administering to a patient a pharmaceutically effective amount of a polypeptide comprising a sequence selected from the group consisting of:

(i) ILLWQIPV (SEQ ID NO: 1),

(ii) a derivative sequence of SEQ ID NO: 1, said derivative sequence having one or more amino acid deletions, additions, or substitutions,

(iii) CPRFQELESETLKSE (SEQ ID NO: 2),

(iv) a derivative sequence of SEQ ID NO: 2, said derivative sequence having one or more amino acid deletions, additions or substitutions, and

(v) a fragment sequence of sequence (i), (ii), (iii), or (iv);

wherein the polypeptide has HLA class-I restricted activity.

55. (NEW) The method of claim 54 wherein the patient has cancer.

56. (NEW) The method of claim 54 wherein the patient has prostate cancer.